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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,534	11/28/2000	Paul Nadj	SIA-P035	9960

22877 7590 04/07/2003

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EXAMINER

MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 04/07/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/727,534

Applicant(s)

NADJ ET AL.

Examiner

Tony Mahmoudi

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 3 recites the limitation "the heap" in line 2. There is insufficient antecedent basis for these limitations in the claim. For the purpose of examination, the examiner is making the assumption that claim 3 is dependent from claim 2, instead of claim 1. Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Rathbun (U.S. Patent No. 6,138,123.)

As to claim 1, Rathbun teaches a method (see Abstract) to perform an add operation from a root to a leaf (see figures 4-8, and see column 6, lines 49-63, where “add operation” is read on “insert() function”), comprising the steps of:

identifying a root (see column 14, lines 4-11);

identifying any unused leaf (see column 26, lines 54-65, where “unused leaf” is read on “empty cell”); and

traversing from the root to the any unused leaf (see column 7, lines 4-22.)

As to claim 2, Rathbun teaches wherein the data structure comprises a heap (see column 8, lines 37-40, and see column 36, lines 12-22.)

As to claim 3, Rathbun teaches wherein the traversing step comprises the step of percolating values within the heap (see column 3, lines 56-63, and see column 10, lines 43-47.)

As to claim 4, Rathbun teaches wherein the traversing step comprises the step of not percolating the leaf to the root (see column 16, lines 58-64, wherein “not percolating the leaf to the root” is read on “finding the proper location for a new value”, and see column 34, lines 24-34.)

As to claim 5, Rathbun teaches a method (see Abstract) for performing a remove operation in a data structure (see figures 9-10 and 27, and see column 6, lines 49-63, where “remove operation” is read on “remove() function”), comprising the steps of:

removing a value from a root that leaves a hole (see column 8, lines 1-10); and

percolating the hole to a leaf position (see column 8, lines 11-15, where “percolating the hole to a leaf position” is read on “re-ordering data structure”).

As to claim 6, Rathbun teaches wherein in the percolating step, comprising the step of percolating the hole to any arbitrary leaf position in the data structure (see column 8, lines 11-15, where “percolating the hole” is read on “re-ordering data structure”, and see column 27, lines 40-59.)

As to claim 7, Rathbun teaches wherein the data structure comprises a treelike structure (see figures 1-2.)

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to further show the state of art with respect to methods and systems of retrieving and sorting data structures in general:


U.S. Patent No. 6,105,018 to Demers et al, teaching a tree-like data structure consisting of identifying nodes as well as adding nodes to tree structure (see Abstract, and see figures 1-11.)

7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

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April 1, 2003


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